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The perceptions of STEM Tutors on the role of tutorials in distance learning

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The perceptions of STEM Tutors on the role of tutorials in distance learning

Abstract

As part of a wider study into perceptions that different university stakeholders have of tutorials, we investigated the UK Open University model for tuition through a process of semi-structured interviews with a self-selecting set of STEM tutors. The aim of the study was to elucidate perceptions that tutors have of the role and purpose of tutorials, and their perceptions of student expectations of group tuition. Thematic analysis of interview transcripts using a grounded theory approach identified several key themes. These include perceptions of the tutor role in group tuition: facilitating academic learning and skills; and supporting the building of confidence, motivation, social interaction and collaborative group-work skills. Difficulties were identified in encouraging student interaction in online synchronous tuition. In addition, mismatches became apparent between tutors' perceptions of student expectations of tuition and their own preferred approaches, with suggestions that students expect a didactic rather than interactive experience.

Keywords

Distance learning; Group tuition; Tutor perceptions; Student expectations; Online tuition

Introduction

Within the past few years, changes in the UK Higher Education (HE) environment have led to an increased focus on enhancing the student experience in order to maximise student success. In England, the Teaching Excellence Framework

(<https://www.gov.uk/government/collections/teaching-excellence-framework>) is a strong driver to promoting excellent teaching and increasing student-facing accountability within English universities, an effect which ripples out to the other UK nations (e.g. see Universities Scotland, 2017). As part of this, HE should provide “an environment that develops the ‘soft

skills' that employers consistently say they need. These include capacity for critical thinking, analysis and teamwork, along with the vital development of a student's ability to learn" (Department for Business Innovation & Skills, 2016). One of the ways that universities, whether campus-based or distance institutions, have traditionally addressed this aspect of education is by providing tuition in groups. Tutorials for groups of students can address the demand for critical soft skills to be developed and can enrich the learning experience, whilst also allowing needs of individual students to be addressed (Roodt, 2013; Wilson, 1996). Understanding perceptions of these tutorials from the point of view of tutors and students, and indeed other stakeholders within our institutions, can give us insights into mismatches between expectations and practice. Addressing such mismatches could then allow staff to develop more effective forms of support.

Another change over recent years in many HE institutions, in the UK, but also the US and elsewhere, has been a move to the provision of more online tuition, either in online-only universities (e.g. Badia, Garcia, & Meneses, 2016), or as part of a blended learning strategy (e.g. see Seaman, Allen & Seaman, 2018, for a report on the increase in numbers of students studying online in the US). This change may affect how staff design and run their tutorials, including content and style.

In this study, we discuss the results of an early part of a wide-ranging study at this time of change, in which we intend to explore the perceptions of group tuition within the UK Open University (OU) from various stakeholder viewpoints (tutors, students, academic managers). In this initial paper we look at current perceptions of OU tutors working in STEM disciplines about the role and purpose of tutorials, and also tutor understanding and perceptions of student expectations. The issues that emerge have relevance across disciplines and cross-sector, and are particularly relevant to institutions which have a distance or online offering.

Educational context

The OU is the largest provider of HE distance education in the UK, with its model of open distance learning. Teams of academic authors and support staff working in module teams produce comprehensive self-study materials, while for most modules, students are assigned to a small group (typically containing 20 students), the tutor group, supported academically and, to some degree pastorally, by a single tutor. The role of the tutor is to support self-study through detailed feedback on assignments (correspondence tuition), one-to-one interaction with students, and by delivering group tutorials, the subject of this study. These tutorials can be either face-to-face or synchronous online, or a mixture of both. In most disciplines, tutors use their judgement to choose the content and teaching style adopted in their tutorial sessions, so as to best support students at given points in a module. Although attempts have been made *post-hoc* (e.g. Tait, 2000) to analyse at a high-level the purposes of tutorials, we would contend that it is the practice and perceptions of experienced front-line STEM teaching staff that defines the purposes, content and style of tutorial provision for individual groups of students. Since such views are the product of experience and environment, they are likely to change over time, as indeed are student expectations of tuition (as noted by Stevenson and Sander, 1998).

The OU is making increasing use of synchronous communication technologies, such as Blackboard *Collaborate* (operated in the OU as ‘*OU Live*’), which allow real-time audio and text communication whilst sharing a virtual whiteboard. These technologies can emulate some of the features of a face-to-face tutorial session, whilst offering other features which are unique to the online synchronous environment. An analysis of the OU experience of introducing such systems (Kear, Chetwynd, Williams, & Donelan, 2012) identified a key deficiency of synchronous conferencing in the areas of student interaction and participation, and of social presence more generally. These issues were also highlighted by MacDonald

and Campbell (2012) who went on to discuss how they might be addressed through a programme of discipline-specific professional development for teaching staff. It might be hoped then that tutors working through this medium will have responded to deal with the issues of social presence, although the evidence to date (e.g. Lowe, Mestel, & Williams, 2016) shows that progress in this area is slow. The study reported here involved tutors who all provide both face-to-face and online synchronous tuition.

A distinguishing feature of the OU tuition model is that student attendance is, by and large, optional. Anecdotally, tutors have reported that participation rates in tutorials are often low, which may indicate that many students are deciding not to attend tutorials. We believe therefore that it is important to understand student perceptions of group tuition. Although this study does not address this question directly, we can gain some useful insights from what tutors report as student expectations.

Rather than investigating the specific changes discussed above, we wanted to be sensitive to other changes that might shape tutors' views of tuition. Consequently, we adopted a more holistic approach, described below, that aims to capture broader factors that may have influenced tutor perceptions of the purpose of tutorials within the OU system.

Our aim in this study was to understand, in general, OU STEM tutor perceptions of group tuition and also to investigate how tutors perceive student expectations of group tuition.

Method

A qualitative approach was taken to data collection, consisting of semi-structured recorded interviews with 19 OU STEM tutors who had volunteered to participate. Interviews were conducted either by telephone or using the online synchronous software in use at the OU at the time, OU Live. There was a mix of open and closed questions that served as starting

points for a conversation which could then evolve flexibly. Each interview followed a similar pattern. Background and experience of tuition within and outside the OU were probed, followed by a focus on perceptions of the purposes of group tuition in the OU context. Tutors were then asked about their perceptions of other viewpoints, those of students in particular, and whether this influenced their approach to tutorial design and delivery. Table 1 shows the full set of questions used. All interviewees were provided with the initial questions in advance, which allowed time for reflection and preparation.

Research exists that frames specific tasks and roles of distance tutors (e.g. Jelfs, Richardson, & Price, 2009). However, in the present naturalistic study, it was appropriate to allow themes to emerge in an inductive, open-ended manner, rather than constraining the analysis to fit within previously existing theoretical frameworks. Therefore a grounded theory interpretive approach (Glaser & Strauss, 1967) was taken to analyse the data, as this provides a useful framework when the aim of a study is to learn about participant perceptions, and where the data collected is primarily qualitative and descriptive (Cohen, Manion, & Morrison, 2001).

Recordings of each interview were transcribed and then analysed by a team of researchers (the four authors of this paper). Initial independent thematic analysis by each researcher involved iterative reading of the scripts with occasional revisiting of the recordings. Further analysis, based on the principle of constant comparison, was carried out by all four authors at a face-to-face workshop in order to review and agree on coding, and to draw out key emergent themes. Note that the researchers' initial codings were found to be closely aligned.

Tutor background	What modules have you tutored on? Have you tutored in other faculties (as well as STEM)?
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(closed questions)	What experience do you have of tuition outside the OU?
Purposes of tuition (open questions)	<p>What do you think group tuition in the OU is for?</p> <p>How have you come to this understanding of the purpose of group tuition?</p> <p>Have your expectations of the purposes of group tuition changed or developed since you started with the OU?</p>
Mode of delivery (closed questions)	<p>Can you tell us the mode of delivery for your group tuition?</p> <p>How is group tuition delivered on your module/s?</p>
Objectives (open questions)	<p>What are your objectives of your group tuition?</p> <p>To what extent are you given guidance on the objectives of group tuition by your module team/s?</p> <p>How do you decide what to include in your tutorials?</p> <p>How do you decide when to offer tutorials, if you are able to do so?</p>
Other views (open questions)	<p>How do you think that your views of group tuition align with those of the module team?</p> <p>your line managers?</p>

	other tutors?
Perceptions of student views (open questions)	<p>How do you think students benefit from group tuition?</p> <p>What do you think students see as the purposes of group tuition?</p> <p>How does that influence the approach you take to planning/designing/delivering your tuition?</p>

Table 1. Semi-structured interview questions.

Study Participants

Interviewee ages ranged from 43 to 72 (Figure 1). All interviewees were first-level tutors from science (10), engineering and technology (6) and mathematics (4) modules, some of whom worked in more than one STEM discipline. Most also had extensive tutoring experience at higher levels, had experience across disciplines and faculties (Figure 2), and almost all had extensive teaching experience external to the OU. Thirteen had taught or still teach in colleges and/or schools. Seven had taught or still teach in other HE institutions. Five work in teaching and learning in other areas such as professional development, vocational training, basic literacy and prison teaching. The tutors were based in locations across England, Scotland and Wales, from large towns to remote areas.

We recognise that by asking for volunteers, our interviewees may have had a strong prior interest in tutorials and their purposes, which may have led to some bias: the views expressed here may be more representative of tutors who have a deeper interest in tuition than the average tutor.

In order to try to reduce the possibility of insider bias caused by any power relationship brought about by interviewing colleagues in our immediate area, the researchers first interviewed four of the tutors, each of whom was outside the individual researcher's immediate field. These four tutors went on to conduct interviews with fifteen other tutors, chosen to be outside their immediate work areas. Even so, in some cases, the interviewer and interviewee were colleagues who had previously worked together, so it is possible that familiarity and understanding of each other's background and beliefs about tutoring may have had an influence on our findings. However, in reviewing the recordings and transcripts of each interview, we found no evidence of influencing of interviewees: in fact, there were probably advantages in having a common language and understanding of the tutoring process, as this allowed interviewees to talk freely about their views (Robson, 1993).

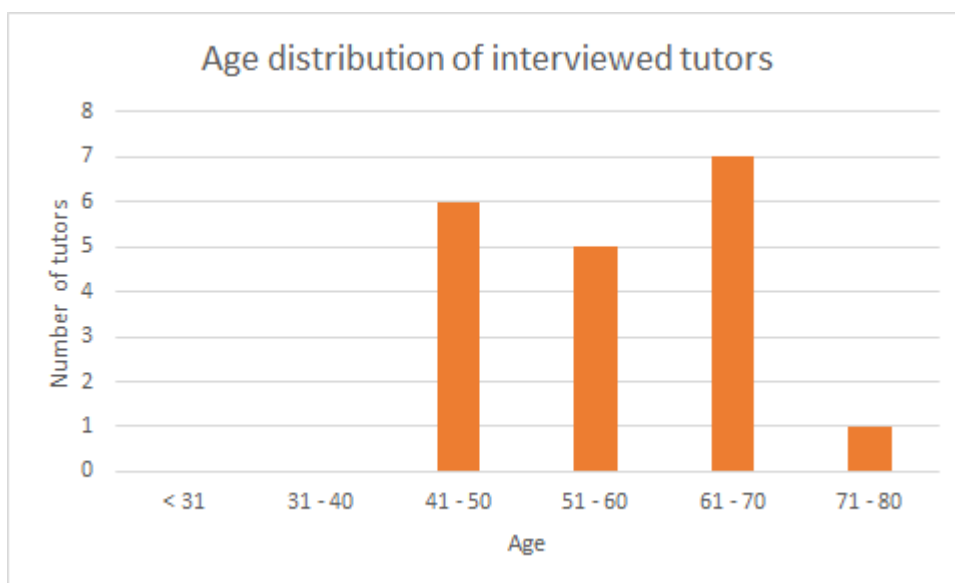


Figure 1. The age distribution of the sample of interviewed tutors.

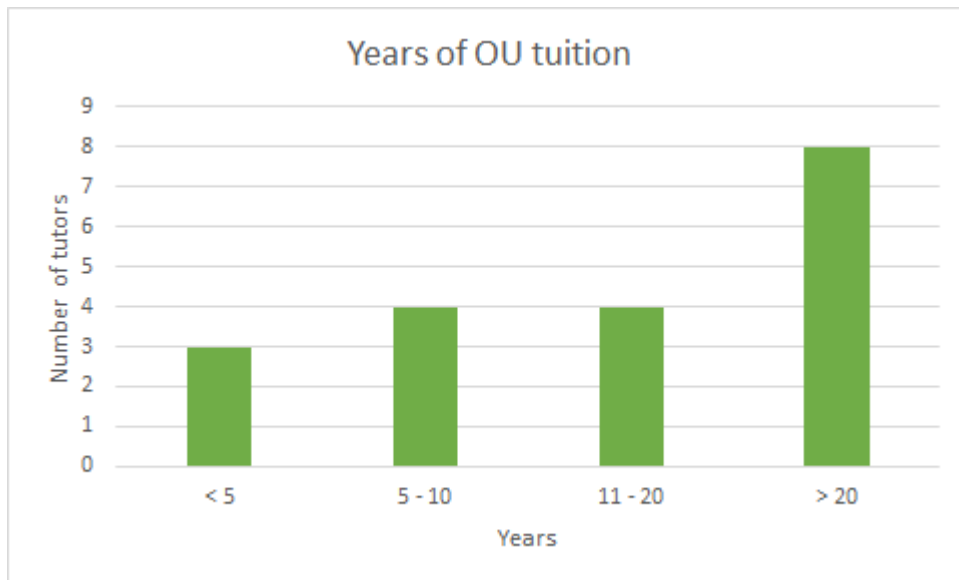


Figure 2. The distribution of the number of years of work experience as a tutor of the sample of interviewed tutors.

Results

We present our results under two headings: *Emergent Themes*, which looks at tutor perceptions; and *Identified Issues in Tutorial Provision*, which discusses specific issues arising from the data.

Emergent Themes

A number of themes emerged from the analysis of interviews with tutors. These include tutors' perceptions of their tuition role, including facilitation of learning and supporting students through threshold concepts; their perceptions of tutorials and their purpose, including motivation, collaboration and social interaction; and their perceptions of what students want from tutorials, which focusses on assessment and how these expectations have changed over time.

Tutors' Perceptions of their Roles

Tutors as facilitators. In the context of the OU, where all the study materials are provided by the academic authors, it is not surprising that tutors see themselves as facilitators of student learning. Using the framework of Kember (1997) we suggest that these tutors have a student-centred, learning-oriented conception, rather than a teacher-centred, content-oriented conception. These findings chime to some extent with the findings of Jelfs et al. (2009). They found that Science tutors largely had a student-oriented conception of teaching, while, in contrast, Technology tutors had an impersonal concept of tutoring. In the present study, every STEM interviewee, including the Technology tutors, in some way expressed their view of themselves as facilitators of student learning. We should note again that because the tutors in this study were self-selecting, they may have a deeper interest in, and perhaps a more reflective view of, tuition than a typical tutor. One described the purpose of the role to be

... to guide a student through the material rather than to teach them,

essentially acting as the 'guide on the side' not the 'sage on the stage' (King, 1993). This role extends beyond engagement with the delivered material, with tutors also reporting that facilitation was to 'enable students to participate themselves', as well as 'allowing students to share ideas and knowledge' and 'getting students to do stuff for themselves'.

Addressing Threshold Concepts and Skills. Sixteen of the interviewees stated that a key purpose of tuition is to address threshold concepts (Meyer & Land, 2006), challenging material and pinch points. These tutors agreed that through tuition they are able to help students '...with the concepts they are having difficulty with or skills they are having difficulty with', and that they are 'helping [*students*] to engage with the more challenging aspects of the module'. One tutor noted:

...[students] benefit from the reinforcement of concepts through guided practice.

Experience allows tutors to predict student difficulties and misunderstandings, thereby allowing design of appropriate tuition:

Once I am used to the module, I might have more idea of what I think are the sticking points and difficulties.

Further, two-thirds of these interviewees saw challenging their students intellectually as important in order to enrich learning experiences:

...it is about extending learning from what they have got in their distance learning model, it is about adding another dimension.

Tuition is also seen as an opportunity for developing key transferable skills that students will need in further studies and future employment. These tutors help with

...concepts, scientific concepts the students have difficulty with, skills, particularly maths skills.

and

Part of the tuition helps to develop this type of skill...basically professional skills they can apply that employers value a lot.

Tutors' Perceptions of Tutorials

Motivation and building confidence. Two-thirds of interviewees identified encouraging student motivation as an important part of the tutorial context:

...where you are geeing up the whole group, preparing them for what is coming and giving them some advice and guidance on how to tackle it.

This ties in closely with the findings of Ogina and Mampane (2013), who noted that tuition

can motivate students to study.

Within this, building student confidence was seen as a key outcome of group tuition, something that is perhaps particularly needed in a distance learning context. Tutors want their students to feel free to seek guidance and 'not be frightened of asking questions, not be frightened of being wrong'. Over half of the tutors mentioned the importance of developing self-confidence in students, and were aware of instances where their support had been instrumental in this process:

...a student will sort of say that they didn't think they could do it. So that is a benefit, that is a self-confidence thing with students isn't it?

Enabling social interaction. Seventeen interviewees noted that they perceived social interaction as an important purpose of group tuition for the students. This observation is in line with the findings of Stevenson and Sander (1998), who surveyed OU psychology students about their expectations of face-to-face tuition. Distance-learning students may feel isolated, and tutorials are their main opportunity to experience social learning.

We are trying to get them to have an opportunity to socialise with each other, gain some friends, share ideas and expertise and mutually resolve issues.

Tutorials give students '...a sense of inclusiveness and belonging, otherwise they would feel very much out on a limb...'. One tutor observed that 'for me learning is a group activity and without that social element to the learning people don't learn as perceptively'. Tutorials are '...really good for the students socially...when they meet other students it can really enliven them and invigorate them'.

Enabling collaboration. The ability to collaborate in group work is essential in most workplaces (Department for Business, Innovation & Skills, 2016). All nineteen tutors

mention tutorials as 'providing opportunities for *[students]* to collaborate as a group'.

Collaboration and group work help students develop their learning through peer interaction:

... particularly in face-to-face there is a huge opportunity for students to learn from one another... actually if you as a student are explaining it to another student, then that helps you get it clear in your mind in order to be able to explain it, as much as it helps the student who it is being explained to.

and

The students can help each other: learning is pretty much a group process.

Tutors' Perceptions of Students' Tutorial Needs

Through their interaction with students, every tutor interviewed had developed their own view of the student perspective, although this may not be a full picture:

... it's good to have students' feedback and see what they are interested in ... *[but]* it's a lot harder than it seems trying to get students to tell you *[what they want]* ... I normally sit down and I normally think, if I was a student on this module, what would I expect?

Tutors may also reach their understanding of the value of tutorials based on their own background and experiences in HE:

I still remember how useful some of the tutorials that I attended were, so I think I try and model some of my tutorial aspects around the things that were useful to me when I was a student.

Passive or active? There was a shared belief amongst half the interviewees that their students expected a didactic experience instead of a facilitative one:

...at level 1 a lot of them arrive thinking that it is a lecture or lesson and they will sit there in rows, preferably on the back row, and keep quiet while you write things on the board, so ...it is a bit of a shock that you are actually asking them to do things.

Despite this, OU tutors are clearly capable of managing student expectations and providing a fruitful experience:

Quite a number of students have come up to me and said they really like doing the hands-on stuff and they find that are learning a lot by doing it.

One tutor recalled,

The expression on somebody's face when I challenged them once was quite interesting. He came up to me afterwards and he said 'I enjoyed that so much' ... It wasn't what he was expecting.

Assessment focussed. One strong perception, shared by sixteen of the tutors, is that students expect tutorials to concentrate on and prepare them for their assessment tasks. A typical response was:

I spend a majority of time in tutorials on support for assignments because I think that is what the students want.

This is a clear source of tension for tutors: they would like to expand the student learning experience yet they feel constrained to meeting perceived student expectations of assessment preparation:

It would be a wonderful opportunity to give them a very rounded-off introduction to studying and to learning, to the module and to the pathway but they don't take this on. They want to have that *[assignment]* preparation and then they want to go home.

Changing expectations? Almost half the interviewees believe that students and their expectations have changed:

the *[OU]* student population has changed and become significantly younger, and I think in many ways more demanding.

Expectations have also changed because of 'technology improving a lot'. Tutors recognise

that students will now use the internet to support their studies: '...they tend to ask their questions on the internet or forums'. Tutors also believe that students have busier lives and less time to devote to their studies:

I think over the years students used to be on schedule and they used to be prepared to spend more time studying in order to be on schedule. I think that life for, maybe for all of us, but for a typical student has got much busier now. They are trying to cram more things into life. ... you used to know that pretty much all your students would be on schedule ... Now you have to accept that most of them will be madly trying to catch up.

Eighteen of the nineteen participants mention such constraints on student time in relation to falling tutorial attendance.

Identified issues in tutorial provision

The interviews set out to elucidate tutor perceptions of the purpose of group tuition as described in the previous section. However the interviews also highlighted two areas that tutors perceive to be important factors in determining how well tutorials actually meet these stated purposes: the move to online delivery, and possible mismatches between student and tutor expectations of the purpose of tutorials.

Online Delivery of Tutorials.

Although the tutors were not specifically asked about the effect that online delivery has had on tutorials, this emerged as a theme that fifteen of the tutors referred to, either directly or indirectly. Problematic issues of online delivery have long been anticipated, especially with regard to the interaction that tutors see as a key strategy in facilitating learning or helping students with threshold concepts. On the basis of analysis of student questionnaire data from OU modules taught with face-to-face and purely online methods (albeit through asynchronous rather than synchronous methods), Price, Richardson and Jelfs (2007)

recommended training tutors and students in online communication to help alleviate issues arising from a lack of paralinguistic cues in the online environment. In a study of the perceptions of tutors on an online OU module taught using synchronous methods, Kear et al. (2012) highlighted issues of interaction and participation, which they attributed to lack of social presence.

From our study, it is evident that barriers to interactivity remain, and are seen as problematic by the majority of tutors. Interviewees reported that they do attempt to develop interactivity in online sessions. A typical response echoes the frustrations of many tutors in facilitating interactive sessions,

I am still struggling if I am honest, with OU Live [*online synchronous*] sessions to make them more interactive. I can set up quizzes and polls and things like that but to actually get students to speak I find quite difficult, to get them to write on the whiteboard is even more difficult...

So, while tutors have taken steps to develop online teaching materials which require student input, student engagement in more direct interaction is still very limited. There is a sense that while some engagement that helps students to test their understanding is possible, the lack of feedback from learners is preventing tutors from feeling that they are engaging with students at an individual level.

Interaction in tutorials is also seen by tutors as important in helping develop self-confidence in students. The effect of the move to online delivery on this aspect of tutorials did not receive much comment, but where it was mentioned, there was an implication that online tutorials are not as effective as the face-to-face,

I think a lot of the face-to-face stuff is confidence building, OU Live as well but I think face-to-face it is about encouraging and letting them know that they are doing well and letting them meet each other and find out that they are in the same boat, that sort of thing...

One tutor made an observation that the ability to watch recordings of online sessions could be beneficial: 'I think in a way that is one of the good things about OU Live because if you are really that lacking in confidence you could then listen to the recording'. This then highlights a view that a student who is so lacking in confidence that they would not attend a live online session could however benefit from viewing a recording of a session. Further work would be required to establish whether students do benefit in this way.

While online tuition was widely recognised as presenting challenges to interactivity, nine tutors perceived a benefit to this mode of delivery arising from increased attendance at tutorial events,

...lots of people would agree the fact that face-to-face tutorials is a good way of facilitating the independent learning of students but the downside is that you very often don't get a very good attendance, you get a better attendance on the OU Live type things...

The ease of student access to online events is reflected in the tutor experience of seeing greater attendance as compared to face-to-face tutorials. Overall then, tutors do seem to balance this advantage of online tuition against the difficulties of interacting effectively in the online environment.

Differences between Tutor and Student Expectations of Tutorials

Another area of interest relates to differences between tutor perceptions of tutorials and their (i.e. the tutors') perceptions of student expectations of those tutorials. The issue of mismatched expectations would be of concern in any organisation offering a service, and has been highlighted in a HE context by Borghi, Mainardes, and Silva (2016). While we should not take tutors' views of student expectations as offering definitive information of the student view, they should act as indicators to potential tensions inherent within the OU tutorial model.

With regard to the tutors' approach of running tutorials as facilitative sessions, the tutors' perception, shared by twelve of the interviewees, is that students come to tutorials with an expectation that their tutor will 'teach' rather than 'facilitate learning'. The implication here is that students expect a presentation in the mode of a lecture, whereas tutors would prefer a more interactive approach. The preference for the tutor to deliver a lecture agrees with the findings of Stevenson, Sander and Naylor (1996) who investigated the expectations of third-level OU psychology students in face-to-face tutorials. Despite the differences in subject area, level and mode of delivery, it seems that many students in the OU expect tutorials to be akin to lectures.

Tutors on the other hand, view interactivity as being key to helping students address threshold concepts (Meyer & Land, 2006) since it provides a way of checking understanding and prompting improvisation to meet student needs. The fact that a majority of tutors report that students are reluctant to engage actively in tutorials, especially given the difficulties of online interaction mentioned above, presents a major challenge to the tutorial model. Furthermore, skills seen by tutors as important in the workplace, such as collaboration and group working, which could be developed during tutorials, may be awkward to incorporate and unsuccessful if students are reluctant to engage. It is not clear if the lack of engagement arises from a student preference for lecture-style delivery (as noted above) or from inhibitions to social presence arising from the online environment (Kear et al., 2012). Although, as noted above, Stevenson et al. (1996) reported a preference for lecture-style delivery, focussed group working and well-mediated discussion were also valued by students in face-to-face settings. It may well be that given appropriate activities, students would engage with, and value, online group working.

Another mismatch appears in the focus on assessment. Almost all tutors see students as being overly focused on assessment, and in the extreme, just wanting to learn enough to

pass their module. It is not uncommon for tutors to report that students seem to be learning just enough to gain a qualification and have a task-oriented concept of tuition. As subject experts, tutors recognise the need to challenge students intellectually and broaden their learning experience beyond the study materials. Students do value the expert status of tutors (Jelfs et al., 2009), but it is possible that they do not recognise that expertise as extending to a set of behaviours that the tutor aims to develop.

The changing nature of student circumstances is also mentioned by all but two tutors as a factor leading to changes in student expectations. In particular, whether tutorials represent a valued use of time from the student perspective seems to be increasingly questioned. Tutor perceptions of busier student lifestyles, stronger and deeper interactions with 'off-module' online media and the internet, and the trend towards a younger mean student age were all identified as acting to reduce tutorial attendance.

These mismatches are not lost on tutors, and it raises the issue of the management of student expectations of tuition; especially when students are new to HE and distance education. One approach, advocated by Stevenson, MacKeogh and Sander (2006), is to assess student expectations by questionnaire at the start of a module. While this seems to have advantages in terms of ensuring that tutors have a better appreciation of what students value in terms of tutor support, it is not clear that it provides any useful insight into teaching practices or student engagement in tutorials.

Conclusions

The aim of this study was to explore current practices and expectations of STEM tutors about the tuition of groups within a distance learning model. By adopting a qualitative approach using semi-structured interviews, we believe that we have been able not only to capture tutor perceptions of the purposes of tutorials but also to highlight difficulties that tutors face in

delivering tuition.

On the whole, STEM tutors viewed tutorials as interactive spaces that facilitate student development in knowledge and skills, including valued soft skills such as team-working and communication. Tutors exercise their judgement in deciding on the content (i.e. the concepts or skills worthy of attention) and in choosing appropriate learning activities. The picture that emerges from these interviews reveals two major difficulties that tutors face. Firstly, the move to online tuition using synchronous systems presents a challenge in creating effective interaction: this can create a barrier to communication between tutor and student and between students in a group. Secondly, we identified mismatches between the tutors' aspirations for tutorials and their perceptions of student expectations.

These two challenges need to be further explored and addressed. It may well be that the concept of the online tutorial is one that cannot be realised by direct analogy with its face-to-face counterpart, and that alternative approaches to teaching should be further developed that are better suited to the medium and more engaging for students. Furthermore, we suggest that institutional strategies should be developed such that students could gain a better appreciation of how they could benefit from taking a more active role in tutorials. This may help students to better appreciate the role that interaction with a group (peers and tutor) can play in their own development, and lead to a better realisation of the expected outcomes of group tuition.

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